REQUEST FOR PROPOSAL: Storage Area Network

1   General Information

This RFP is not a contract offer. Receipt of a proposal neither commits the City of Loma Linda to award a contract to any vendor, nor limits our rights to negotiate in our best interest. The City of Loma Linda reserves the right to contract with a vendor for reasons other than price. Failure to answer any questions in this RFP may subject the proposal to disqualification. The City of Loma Linda reserves the right to request additional information that is necessary and pertinent to the project or to assure that the vendor's adequate competence to perform according to bid specifications. Products and services which are not specifically requested in the RFP but which are necessary to provide the functional capabilities proposed by the vendor shall be included in the proposal.

1.1 Cost of Proposal

Expenses incurred in the preparation of proposals in response to this RFP are the sole responsibility of the vendor.

1.2 Right of Rejection

The City of Loma Linda reserves the right to accept or reject any and all proposals, or any part of any proposal, without penalty. The City of Loma Linda may award a contract to a single contractor for all elements for the entire project or may award any of the elements separately. In addition, the City of Loma Linda reserves the right to fund (and proceed with project or purchase), not to fund the project, or to partially fund the project. Any allowance for oversight, omission, error, or mistake by the bidder made after receipt of the proposal will be at the sole discretion of the City of Loma Linda.

1.3 Insurance Requirements

Vendor proposing any installation services shall purchase and maintain insurance in the types set forth below which may arise out of or result from the contractor's operations under the contract, whether such operations performed by the contractor or subcontractor or by anyone directly employed by either, for an amount of no less than $1,000,000:

Commercial general liability

Workers' compensation insurance

Personal injury liability coverage

Comprehensive Automobile Liability insurance

All policies required above are to be primary and non-contributory with any insurance or self-insurance programs carried or administered by the City's.

2 Introduction

The City of Loma Linda, a Local Government Agency was incorporated on September 29, 1970. The City is governed under charter by the City Council/City manager plan. The City has five elected Council Members from which the City Council chooses the Mayor and Mayor pro tempore. With a staff of 80 employees the City maintains vital services to a population of 25,000 residents and 50,000 daily hospital staff.

2.1 Purpose of RFP

The City of Loma Linda is seeking bids from qualified vendors who have experience serving State and Local Government markets and who are located within the Southern California region and who are experienced in installing and configuring enterprise level Storage Area Network (SAN) solutions.

The City objective in acquiring a replacement SAN is to provide the City with a centralized storage environment that lowers the total cost of ownership of both physical and virtual server Data Storage in a high-speed, shared storage environment that offers flexible storage capacity and performance, robust fault tolerance, is compatible with
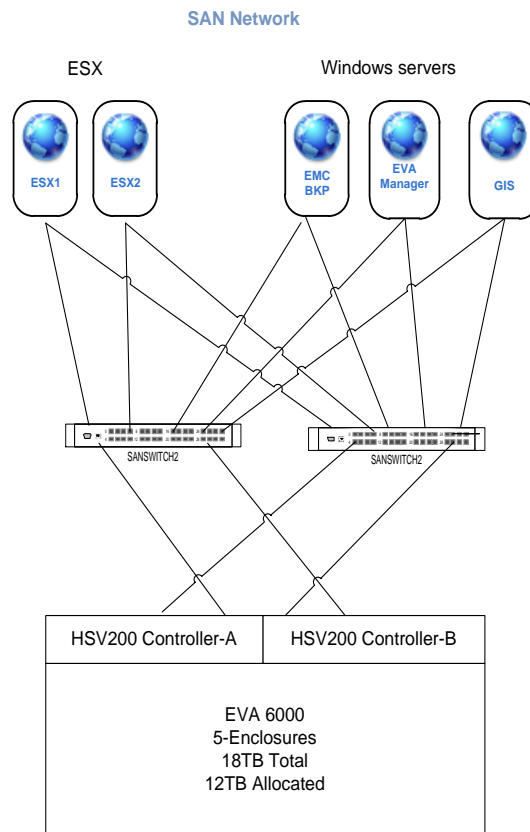
existing virtualization technologies from Microsoft and Vmware and offers intuitive administration. The replacement SAN must minimize disruptions during implementation and be flexible enough to adapt to our current infrastructure.

3 Current SAN Environment

SAN Network

ESX   Windows servers

ESX1   ESX2   EMC BKP   EVA Manager   GIS

SANSWITCH2   SANSWITCH2

HSV200 Controller-A   HSV200 Controller-B

EVA 6000
5-Enclosures
18TB Total
12TB Allocated

3.1 SAN Network Overview

The City currently operates a single HP EVA 6000 18 TB SAN that was installed in 2006. The SAN and its five host servers are interconnected by way of two HP Brocade AM867B 8 port fiber switches. Of the 18 TB of usable SAN space, only 12 TB has been carved out and presented to the Vmware ESX hosts and of this only 6 TB has been utilized by the VM Guests in the form of VMDK disks. The SAN also presents 500 GB

to the GIS server and 150 GB to the EMC Networker Management server. Detailed information for each physical and virtual server can be found in appendix A-F

3.2 Current SAN Overview

At a high level, the main objective behind the current storage area network is to provide The City with a centralized storage environment that lowers the total cost of ownership by providing a high speed shared storage environment that offers increased storage capacity and performance, robust fault tolerance, and flexible storage administration.

The following is the functionality available in the current SAN infrastructure. This includes functionality available on the HP EVA 6000 and HP Storage Works Command View EVA management server.

Current EVA 6000 SAN features and functionality:

- Ability to use a combination of high-end and lower-end storage media
- Ability to create disk groups based on media type
- Ability to create data replication groups
- Ability to present LUNs to individual or multiple hosts including VM hosts, their guests and traditional fiber connected hosts
- Alarm notification thresholds
- Web based administration interface
- Ability to expand capacity on demand without downtime
- Ability to replace failed hardware such as controllers, cache batteries, hard disks, and power supplies without downtime
- Ability to create different RAID level LUNs such as 0, 1, & 5
- Write Cache Policy to "Write Back" and "Write through"
- Multipath Presentation Method
- High block level I/O performance
- Ability to present LUNs directly to VM's

The current City infrastructure is composed of the following major components:

- HP, EVA 6000
- Two HP AM867B 8/8 Full Fabric Ports Enabled SAN Switches
- 3 physical servers (includes GIS, EMC Networker. HP EVA 6000 SAN manager.)
- 2 VMWare Hosts (25 VM guests)

The SAN and attached servers are located in the City of Loma Linda's Data Center; a temperature controlled facility with 110V AC UPS backed power. Rack space is available in our HP 10642G2 19in 42U racks.

Equipment Overview

EVA 6000:

The EVA 6000 is a high performance, high availability virtual array storage system designed specifically for midsize IT environments. It provides easy capacity expansion with no downtime; it is configured to run in degraded mode due to the level of redundancy built into the following hardware components

- EVA6000 2C4D Array, with a pair of HSV200 controllers, five M5314A disk drive enclosures, two FC loop switches, mounting hardware and factory built cables.

Deficiencies

Although adequate, the current SAN infrastructure lacks functionality and features that would make the system more efficient. The purpose of this section is to provide a high level overview of some of the known deficiencies that exist in the current system.

1. Monitoring

   There are no native monitoring tools available in the current SAN infrastructure making it difficult to monitor and troubleshoot performance issues.

2. Virtualization

   The current SAN allows you to create virtual LUNs stripped across all disk drives. However, it lacks functionality that newer systems can provide.

3. Cloning and Snapshots

   Snapshots require a separate license which is not available as part of the EVA 6000.

4. Backups

   Backup software is not part of the current SAN solution however the City utilizes EMC's Networker to backup File, database and VMDK data located within the SAN to an EMC Data Domain disk array.

5. Reports

   The reporting tools available in the current system are very poor and not very user friendly. Reports of issues are sent to email address but are very generic and not very descriptive, making it difficult to quickly identify issues. In addition, there is no trend statistics or event log reports that can be ran to help troubleshoot issues.

6. Storage Utilization and Performance

   The Fiber Channel storage is currently being allocated and carved out using the Storage Virtualization Manager for all physical and Vmware servers.

7. Supportability of current virtualization software

   The current SAN is not on VMware's compatibility list for Vsphere 4.1 or higher.

4 Project Description

4.1 Project Objectives

The City is soliciting responses to this RFP to replace our existing HP SAN and associated software. An award from this RFP is expected to result in a firm, fixed price contract for the purchase, installation and configuration of solutions. The solutions should include product support and maintenance for three and if possible, five years.

The Vendor shall warrant and guarantee support for at least 3 years or migrate the City to a supported platform at vendor cost. The City's objective is to begin work to replace our legacy SAN immediately upon City Council approval and contract execution in the 2nd quarter of Fiscal Year 2014.

There is no obligation expressed or implied on the part of the City to reimburse firms for any expenses incurred in preparing responses for this request.

4.2 Project Scope Overview

The following is a brief summary of the project:

1. Acquire, install and configure the proposed SAN solution (which should include data switches or upgrading the existing switches if needed) and necessary training of City of Loma Linda staff so that they City staff can perform routine SAN administration and migration of data from the existing SAN to the replacement SAN.

2. Acquire, install and configure any additional devices and or software required to manage the new SAN.

3. Acquire, install and configure any additional devices and or software required to support backing up data on the new SAN using the City's EMC Networker enterprise backup system for the purpose of disaster recovery.

4.3 Product and Services Specifications

In an effort to evaluate all available solutions, the City has established an independent set of minimum specifications. Each bid must meet or exceed the specifications listed in this document in order to be considered.

4.4 Primary Location (Data Center)

25541 Barton Road, Loma Linda, CA 92354

4.5 Capacity and Disk

For the purpose of this RFP, the term "usable capacity" implies the amount of effective space available to the City's servers through the use of deduplication, compression and thin provisioning technologies. The City requires a minimum of 12 TB of effective capacity. This does not factor in capacity used for snapshots/clones/replication of data-sets. The proposed solution should be flexible enough to double capacity in a scalable fashion without the need to replace the proposed equipment.

4.6 Technology Platform / Architecture

The SAN must support data volumes larger than two Terabyte (2TB).

The SAN must be VMware and Hyper-v certified.

The SAN must be able to provide multi-path capability to the storage array, and individual hardware components must be fully redundant and hot-swappable to ensure maximum data availability.

The SAN must provide appropriate cache memory to facilitate optimal system performance.

The SAN's utilization of deduplication technologies and or the ability to remove allocated but unused space to achieve the required 12 TB of effective storage without impacting performance is highly desired.

4.7 Management

The SAN must be manageable from a secure web-based interface and if it is recommended a separate management device or server be used to manage the SAN then this device or server must be included in the bid.

The SAN must include the capability to report the overall and detailed views of current and historical utilization.

The SAN must include the capabilities to report storage resource objects and generate a data usage report that can lead to a charge-back report.

The management system must include comprehensive online and remote monitoring abilities without third-party hardware or software. The solution must be capable of generating email alerts for any critical hardware or software events that may occur.

4.8 SAN Switches

It is desired that the solution utilize the current HP AM867B 8/8 Enabled San Fiber switches and it must be able to support the current servers now in place. If it is recommended that the current HP AM867B 8/8 Enabled San Fiber switches be upgraded or replaced than the cost of the upgrade or replacement of the switches be included in the bid.

4.9 SAN Backup

Compatibility with our existing EMC Networker Enterprise backup system is required.

4.10 Implementation

1. The vendor must install the new SAN as the primary production storage unit.

2. The vendor must implement the SAN management software to allow system configuration, performance monitoring and capacity reporting. Initial cost for all management software and licenses, as well as for any ongoing maintenance for a three (3) year period (preferably 5) must be included in the proposal.

3. The vendor must configure the new system to support the City's existing server infrastructure environment.

4. If new SAN switches are required then the vendor must design and implement required configuration to the proposed switches. IF new switches are not required then the vendor will be required to assist the City's IT staff in connecting the new SAN to the existing HP fiber switches and servers.

5. The vendor must provide enough training to the City of Loma Linda IT staff to prepare them for successful migration of data from the existing EVA 6000 to the new SAN which should include all applicable ESX data.

6. All onsite consultants must have access to engineering-level support of the equipment manufacturer.

7. The vendor must provide product training to City of Loma IT staff on best practices and daily management of the SAN.

8. Night and weekend hours are available for prolonged project activities to minimize disruption of service. The City's normal business operating hours are 7 AM to 5:30 PM Monday through Thursday.

5 Calendar of Events

The following table presents the timeline for the selection of the City's Financial Accounting System vendor. The City reserves the right to alter this schedule at any time.

ID	Milestone	Date	Time
1	RFP Release	3/12/2014	
2	*Submission deadline*	*4/01/2014*	*5:00 PM PDT*
3	Vendor Evaluation & Negotiations	04/07/2014-05/29/2014	
4	Submittal to City Council	6/10/2014-07/08/2014	

5	Project Begins	Upon Contract Execution	

6 Instructions for Response

This RFP serves a number of functions. It provides Company background, response instructions, SAN requirements, and includes forms to be completed by the vendor.

6.1 Evaluation Criteria

For this RFP, Bidders should submit a proposal that provides the following information to the City:

1. Description of solution including parts list, licensing, SAN management tools, features and capabilities.

2. Experience implementing the proposed solution.

3. Document experience and recommendations for migration and conversion from our legacy SAN to the proposed solution.

4. Project Management including a proposed Project timeline and work plan with a description of the bidder's approach to successfully completing the Scope of Work.

5. Describe the tools and methods that will be used to review and validate converted systems and data for accuracy and completeness.

6. Description of experience migrating organizations similar in size to the City onto the proposed platform.

7. Proposed timeline to complete the Statement of Work.

8. Cost to complete the Statement of Work including 3 year and 5 year post implementation support warranties.

Criterion	Weight	Criterion Description
Ability to Meet Requirements	30%	Quality of technical solution and consulting services. Quality of proposed project team. Ability to meet milestones and deadlines.
References and Experience	20%	Quality of work and pertinent experience, past performance and firm's qualifications. Proven success implementing proposed solution at similar sized organizations.
Company Position in Industry	20%	Position in marketplace, innovation and expertise, company stability and likelihood of company survival.
Cost	30%	Product value, ongoing costs for maintenance and support, consulting & conversion costs, perceived degree of accuracy in pricing for overall project.

6.2 Bidder Submission Requirements

Bidder must meet all of the following minimum qualifications. Failure to do so shall result in the rejection of the proposal. Bidder shall certify that the primary or principal consultant performing the work and any supporting consultant who may assist the primary consultant meet the minimum qualifications.

1. The Bidder must demonstrate a core competence performing SAN installations for entities similar in scope to the City of Loma Linda

2. The Bidder must have been in existence as a business entity performing such services for a minimum of three (3) years.

3. The Bidder must have all legal permits and licenses.

4. Bidder must disclose 3rd party relationships and contracts required to fulfill the obligations of this RFP.

5. The Bidder must currently or over the past three years have had a minimum total of three (3) years of project experience similar to that being requested in this RFP, and provide the size of these deals and scope of work performed, as well as provide the contacts as reference accounts.

5. The principal technical consultant performing the work must have a minimum of three (3) years experience implementing the solution proposed to the City at organizations similarly sized or larger than the City and provide any certifications held relating to the solution provided.

6. The Bidder must provide services and staff on-site to perform the required services.

Vendors should include any and all documentation to support the above points for evaluation in selecting a vendor. Any other factors arising in the evaluation process not stated above may be used in determining which proposal will be accepted. The City reserves the right to solicit additional information from the vendors to determine which vendor best meets the City requirements. Vendors must include a detailed itemized list with itemized pricing for products and their respective configuration add-ons or options and 3 years (5 is preferred) of hardware/software support and maintenance. Cost should include both 4 hour and next day hardware software support options.

When the response is completed, the bidder must submit the following:

1. One (1) copy of the RFP response in a singular PDF format with the pages arranged in the order it should be printed out and read as a whole.

To save on delivery costs, paper copies are not required, nor are they desired.

All submissions become the property of the City and will not be returned. All quotes shall be valid for 180 days from the submission due date, only one proposal per bidder.

6.3 Where to submit RFP responses

All submissions must be delivered prior to **April 01, 2014, 5:00 PM PDT** to:

Rick MacGavin System Analyst

City of Loma Linda

25541 Barton Road

Loma Linda CA 92101

E-Mail: rmacgavin@lomalinda-ca.gov

6.4 Bidder's Written Questions - Submission

All bidders will be allowed to submit questions to assist them in responding to this RFP. All questions must be submitted prior to the Questions Due deadline specified in the timeline. Questions must be submitted in an electronic format (MS Word) that can be easily copied and pasted into another document so they can be compiled, and questions must easily be separable from the identity of the vendor. All questions and answers will be published to all bidders.

Please submit all questions prior to the deadline April 01, 2014, 5:00 PM PDT via email to:

Rick MacGavin, Systems Analyst

City of Loma Linda

E-Mail: rmacgavin@lomalinda-ca.gov

Inquiries are not to be directed to the City Finance office or any other representative of the City other than those specified in the RFP. Any unauthorized contact, present or future, to any City council member, staff, consultant or any other personnel during the proposal time frame will be grounds for disqualification. The City reserves the right to discuss any part of any response for the purpose of clarification. During the evaluation process, the City may request additional information or clarification from bidders.

6.5 Check List

As a bidder, please review the following checklist to ensure that your bid is compliant:

1. Complete written response to Bidder information requested in Section 6.1
2. Fill out and complete Statement of Work responses to the requirements defined in Section 8.
3. Sign the pledge of Respondent Warranties at the end of Section 8.
4. Fill out Sections 9, 10, 11 and 12 in detail directly into the tables provided.
5. Attach any documents necessary and title it, "Assumptions and Exceptions" to indicate in writing any requirements with which you cannot comply.
6. Attach any documents necessary to lay out a detailed schedule of the cost proposal, being sure to respond to details, duration, tasks, overall costs, and overall scope.

7   Contract Requirements

At the point of contract, a final detailed agreement concerning services and performance expectations will be agreed upon between the City and the awarded Firm. The terms of the final contract between the City and the awarded will be binding and supersede this RFP.

7.1   Statements

All responses to this RFP become the property of the City and will be kept confidential until such time as recommendation for award of a contract has been announced. Thereafter, submittals are subject to public inspection and disclosure under the California Public Records Act. If a Respondent believes that any portion of its submittal is exempt from public disclosure, such portion may be marked "confidential." The City will use reasonable means to ensure that such confidential information is safeguarded but will not be held liable for inadvertent disclosure of such materials, data and information. Submissions marked "confidential" in their entirety will not be honored as such and the City will not deny public disclosure of all or any portion of submittals so marked.

By submitting information with portions marked "confidential" the Respondent represents it has a good faith belief that such material is exempt from disclosure under the California Public Records Act and agrees to reimburse the City for, and to indemnify, defend and hold harmless the City, its officers, fiduciaries, employees and agents from and against: (a) any and all claims, damages, losses, liabilities, suits, judgments, fines, penalties, costs and expenses including, without limitation, attorneys' fees, expenses and court costs of any nature whatsoever (collectively, "Claims") arising from or relating to the City's non-disclosure of any such designated portions of a proposal if disclosure is deemed required by law or court order. The City reserves the right to disclose any documents marked "confidential" if required to do so under the California Public Records Act or pursuant to any other local, state or federal statute or court order.

If a bidder discovers any ambiguity, conflict, discrepancy, omission or other error in this RFP, please immediately notify the City of such error by e-mail at:

Rick MacGavin, System Analyst

City of Loma Linda

E-Mail: rmacgavin@lomalinda-ca.gov

If it becomes necessary to revise any part of this RFP, or if a more exact interpretation of provisions of this RFP are required prior to the due date for proposals, a supplement will be sent to all bidders. The City reserves the right to extend the due date of proposals to accommodate such interpretations or additional data requirements.

Submission of information indicates acceptance by the bidder, of the terms and conditions contained in this RFP, unless exceptions are clearly and specifically noted in the submittal. If the bidder objects to any term(s) in the RFP, or wishes to modify or add terms to a subsequent contract, the submittal must identify each objection, propose

language for each modification and include the reasons for the modification. The City reserves the right to modify the terms prior to execution.

The Proposal determined to be the most advantageous to the City, taking into account all of the selection criteria, may be selected by the City or further action, such as a contract award. If, however, the City decides that no proposal is sufficiently advantageous to the City, we may take whatever further action is deemed best in its sole discretion, including making no contract award. If, for any reason, an awardee is selected and it is not possible to consummate a contract with the bidder, the City may begin contract discussions with the next qualified bidder or determine that it does not wish to award a contract pursuant to this RFP, at its sole discretion.

7.2 Bidder Guarantees

- The bidder guarantees that it can and will provide, at a minimum, the services set forth within the RFP.

7.3 Bidder Warrantees

- Bidder warrants that it is willing and able to comply with State of California laws with respect to foreign (non-State of California) corporations.

- Bidder warrants that it will protect the privacy and provide for the security of the City's member data and that Bidder will require its officers, employees and agents to sign a Confidentiality Agreement provided by The City.

- Bidder warrants that it will not subcontract or delegate its responsibilities under an agreement without the prior written permission of the City.

- Bidder warrants that all information provided by it in connection with this proposal is true and accurate.

- Bidder acknowledges they have read and reviewed all contents of this RFP. The signature below warrants the bidder's ability to complete the described Statement of Work in accordance with the terms and conditions set forth herein.

8 Statement of Work

The bidder will be expected to complete their response to each item in the Statement of Work with their approach to satisfying the requirement including proposed milestones and deliverable accordance with the terms and conditions set forth herein. Please review each requirement and provide a response to each requirement. Bidders must sign the Respondent Warrant at the end of Section 8.

8.1 Project Requirements

Please provide a written statement describing your approach and ability to meet the following Project Requirements:

1. Initiation Phase

    a. Project Staffing Plan

    b. Work plan to include detailed tasks and time estimates for deliverables described in the Statement of Work

    c. Quality Assurance Plan

2. Requirements Phase

    a. Validate Requirements

    b. Validate technical infrastructure

    c. Provide the City with detailed installation plan.

3. Installation & Training

    a. The components will be installed and tested in a professional manner by trained and qualified personnel.

    b. Equipment will be delivered to the City prior or on the due date specified in work plan.

    c. Provide all required installation material.

    d. Ensure proper power, connectivity, configuration and access.

    e. Test and validate that the new SAN is accessible from the City's existing Servers. The vendor shall install and test all components in accordance with the manufacturer's written policy and guidelines. The vendor shall certify in writing that installed equipment has satisfied all testing requirements.

    f. All system hardware and software features and configuration shall be tested and certified in working order by the vendor.

    g. Provide "as built" documentation, within three weeks from the project completion date.

    h. Provided the City with 60 day warranty period to correct any aspect of the vendor's solution that is not functioning properly and according to manufacturer specification and RFP requirements.

    i. Provide training to the City staff on the "as built" equipment and configuration.

4. Warranty

    a. 3 year warranty of the vendor's entire SAN solution and management software.

8.2 Technical Requirements

Please complete the requirement matrix by filling in the Vendor Response column to each requirement.

The following are general characteristics of the desired storage environment.

- *Performance* –(Must be able to meet the current and future server needs as outlined in Appendices B-F)
- *Availability* – requirements to prevent loss of data content and loss of access to data required to achieve "5-9's " (99.999%) availability. Capability to recover from catastrophic disasters via mirroring and backup techniques that protect the content through geographic diversity.
- *Scalability* – the data storage solution must be easy to grow to address the increased demand of future applications.
- *Cost* – the cost of ownership needs to be reduced, including the cost of maintaining and managing the storage system.

ID	Category	Requirements Description	Vendor Response
1	Support	Require 3 years of hardware software maintenance and support, 5 years is preferred.	
2	Availability	99.999% availability is required	
3	Serviceability	Single Point of contact for solution support	
4a	Repair Response Time	4 Hours parts and services availability	
4b	Repair Response Time	Next day parts and service availability	
5	Online Support	24/7 Online Technical Support	
6	Knowledge Transfer	At completion of project provide knowledge transfer, and Web based Knowledge Base	
7	Training	Training should be available to IT staff for managing, maintaining, monitoring, and	

		troubleshooting issues.	
8	Telephone Support	24/7 Telephone Technical Support	
9	Interoperability	Allow addition or replacement of future components Allow for maintenance with zero downtime Allow Load Balancing of resources.	
10	Support for physical hosts connected to SAN through SAN switches	The Storage Area Network must be able to support physical hosts utilizing, Vmware ESXi 4.0 through current and Microsoft Windows server 2003 through current.	
11	Throughput requirements	Must be capable of transferring data to 4 and 8 GB fiber connected servers.	
12	Capacity	12 TB of useable storage with ability to scale up to 24 TB in a modular fashion with minimum disruption.	
13	Performance	VMware ESX environment and other physical servers require performance for SQL and Exchange databases suitable for a 100 user environment.	
14	Newer storage technologies	It is desired that the SAN support the latest technologies.	

15	HP Brocade AM867B SAN switch compatibility	Is the proposed solution compatible with the City's current SAN switches	
16	Environmental requirements	SAN must fit into an HP 10642G2 19in 42U rack. The City Datacenter operates in a controlled temperature of 68-71°F with redundant AC unit, a certified Fire Suppression System and redundant UPS battery system.	
17	Cooling	Storage solution should be able to operate in a controlled temperature of 68-71°F.	
18	Electrical	Able to utilize UPS backed AC 120V NEMA 5-15	
19	Fault Tolerance	The SAN must provide fault tolerance against power supply failure, disk failure, controller failure, and Data Path failures. Newer storage failure recovery technologies such as mesh active controllers that re-mirror the cache to other controllers in the event of a failure would be desired.	
20	Storage Resource Management	The SAN solution should be able to optimize the efficiency and speed with which available drive space is utilized such as SAN performance analysis, storage virtualization, storage provisioning, forecasting of future needs,	

		maintenance of activity logs, user authentication, protection and management of storage expansion	
21	Data Footprint Reduction Technologies	It is desired that the SAN utilize technologies to reduce the footprint of the overall storage utilization such as Duplication, Compression, and Thin Provisioning.	
22	Backup and Restore	EMC Networker is Loma Linda's Enterprise backup system. The backup target is an EMC DataDomain disk library. The Storage of choice should be compatible with the current Backup Solution.	
23	Remote Data Replication (supported but not part of this RFP)	SAN should be capable of cloning its data content to a remote location for business continuity purposes. Data cloning is a possible future expansion of the SAN.	
24	Monitoring	The solution of choice must include automated e-mail alerts.	
25	Storage Management	Strong Storage Management capabilities are required to manage the overall SAN device, Disks Management, Disk Array Management, Controllers and Cache, Fault troubleshooting	

26	VMware Storage Certified	The SAN solution of choice should provide storage management capabilities for VMware and should be a VMware certified SAN Solution.	
27	Microsoft Storage Certified	The SAN solution of choice should provide storage management capabilities for HyperV and should be a HyperV certified SAN Solution	
28	Remote Management	Management of the SAN should be done via a secure Web based interface and accessible from the City's IT staff's computer's	
29	Multi-User Admin Access	Management of the SAN should be performed by individual administrative accounts managed and monitored	
30	Storage Performance Monitoring	Monitoring tool should provide a comprehensive view into the health of the storage device(s) through a centralized management console. It should be able to monitor all logical connections and physical infrastructure	
31	Storage Capacity Monitoring	Provide an automated way to collect forecasting data to make it easy to view growth rates, project when capacity will be reached, and forecast costs and budgetary requirements	
32	Quality of Service	Storage Solution should be able to support a dynamic caching algorithm to prioritize data access on the SAN based on application performance	

		requirements.	
33	Event and Error Logs	Event tracking should Identify physical and logical failures as well as capacity and performance issues and other events including Zoning conflicts and storage thresholds	
34	Thresholds management and monitoring and notification	Storage thresholds should be monitored via SNMP traps, and notifications should automatically be sent to specific group(s) via e-mail	
35	Security Access management and monitoring	Must provide security access control, Individual Admin Account authentication, access	
36	Trending and reporting	Provide storage trending reports of various types, including utilization, & performance.	
37	Scalability	Scalable from 12TB to 24TB of effective capacity without having to migrate to a new storage system.	
38	Host Operating System Support	Must support VMware Vcenter 4.0 and ESXi 4.0 server and be certified to support current version of VMWare ESX and Microsoft Hyper-V	

39	Guest Operating System Support	Windows Server 2003 through 2012, Windows 7, Windows 8, Linux	
40	Hardware upgrade support	It is desired that Hardware upgrades be covered under hardware maintenance	

Respondent Warrant:

I acknowledge that I have reviewed all of the above stated requirements and Statement of Work. My signature below signifies acceptance of all of these requirements and is an indicator that all above requirements and the Statement of Work will be met with the Proposal provided at the end of this document. I warrant that I am a duly authorized officer of the bidder empowered with the right to contractually obligate my firm's response with the City

Signature
of Official: _____

Company
Name: _____

Name: _____

Date: _____

Title: _____

9   Vendor Preference and References

9.1 Local Vendor Preference

The City of Loma Linda has established a local vendor preference. When quality, service, and other relevant factors are equal, responses to Requests for Proposals will be evaluated with a preference for local vendors. Note the following exception:

1. Those contracts which State Law or, other law or regulation precludes this local preference.

A "local" vendor preference will be approved as such when 1) The vendor and or their partner conducts business in a fully staffed office with a physical address within the Southern Californian region; 2) The vendor or their partner holds a valid business license issued by the County or a City within the Southern Californian region; 3) The vendor or their partner has conducted business at the local address for not less than six (6) months prior to the due date of this Request for Proposal; 4) The vendor or their partner has experience for not less than six (6) months supporting the Federal, State, Local or Education businesses.

<For the purpose of this Request for Proposal the Southern California region is made up of the Imperial, Kern, Los Angeles, Orange, Riverside, Santa Barbra, San Bernardino, San Diego, San Luis Obispo, and Ventura California Counties>

	YES	NO
Do you claim local vendor preference?		
Do you conduct business in an office with a physical location within the Southern California region?		
Have you served the Federal, State, Local Government or Education Markets for more than six (6) months		
Business Address:		
Years at this Address:		
Does your business hold a valid business license issued by a County or a City within the Southern California?		

9.2 References

Please list references for similar projects over the last three years in reverse chronological order (most recent first). Please list a maximum of THREE.

Reference #1: [CLIENT NAME]			
Project Start Date		Completion Date	
Name of contact		Telephone no.	
Address			
E-mail		Title	
Total Vendor Cost			
Was the Project completed on schedule and budget?			
Please briefly describe the scope of the project.			

Reference #2: [CLIENT NAME]			
Project Start Date		Completion Date	
Name of contact		Telephone no.	
Address			
E-mail		Title	
Total Vendor Cost			
Was the Project completed on schedule and budget?			
Please briefly describe the scope of the project.			

Reference #3: [CLIENT NAME]			
Project Start Date		Completion Date	
Name of contact		Telephone no.	
Address			
E-mail		Title	
Total Vendor Cost			
Was the Project completed on schedule and budget?			
Please briefly describe the scope of the project.			

9.3 Organization and Bidder Questionnaire

Date of Response	
Company Name	
Primary Contact Person	
Title	
Address	
Telephone Number	
Facsimile Number	
E-mail Address	

9.3.1 Ownership

Describe the background and ownership of the firm.

Year company was formed and began providing Storage Area Network Solutions.	
Describe recent or planned changes to the ownership or organization structure.	

9.3.2 Bidder Background Questionnaire

Please state the date your company started in business. _____

Will your company agree to provide a 30-day time period from the date the equipment is installed to allow a trial period to ensure that the equipment is operational and compatible, before payment is rendered?

Yes: _____ No: _____

Where is your closest support facility/sales office? _____

Where is your headquarters office? _____

Is your company an equal opportunity employer?

Yes: _____ No: _____

Does your company have any family or business relationships with the City's Council members?

_____Yes or _____No. If yes, please explain

_____

_____

Do you have a toll free support line?

Yes: _____ No: _____

Do you maintain a 24 X 7 call in center for problems?

Yes: _____ No: _____

What is your average response time (hours) for a telephone response to an initial service call? _____

What is your guaranteed maximum response time (hours)? _____

Please list any special capabilities or qualifications that you would like considered in evaluating your company.

_____

_____

_____

9.3.3   Litigation

Over the past five years, has the bidding company or any officer or principal, been involved in any business litigation or other legal proceedings related to the sale, implementation or maintenance and support of its Storage Area Network solution? If so, please provide a brief explanation and indicate the current status.	

10 Project Lead

Please include details regarding the project manager and key project team members assigned to the project. The bidder acknowledges that by submitting the person below, the bidder is committing to making these resources available during the duration of the project during business hours (8am – 5pm), Monday – Friday, Pacific Time. The project manager is expected to be available as required to make the project successful. It is expected that any replacement of the Project Manager will have the same credentials and experience of the person below or more.

10.1 Project Lead Worksheet

NAME OF PROJECT LEAD:			
Years With Bidder		Years of SAN experience	
Please describe the candidate's work on similar installations over the last three years			

11 Assumptions and Exceptions

This section describes the response requirements for all assumptions and exceptions to requirements, specifications, and other items within the RFP documentation.

11.1 Response Requirements

The bidder must identify all assumptions they made in preparing their proposal as well as any exceptions that the bidder takes with regard to the requirements expressed in the RFP. This section must contain a list of all assumptions and exceptions, with a cross-reference to the specific section of the RFP to which the assumption or exception applies.

This RFP is being presented in PDF format in order to structure bidders' responses and make it easy to respond. Microsoft Word format will also be available upon request. Any changes, however, to the text, content or spirit of this RFP by any potential bidder for any reason will be grounds for disqualification. Any questions or clarifications should be addressed in the Question & Answer period.

12 Cost Proposal

12.1 Task and Hours Breakdown

Please provide a breakdown of tasks associated with the Project Plan provided earlier.

Please estimate the number of hours per task.

12.2 Total Costs

Please provide a complete breakdown of all costs including options for 4 hour and next day support.

Appendix - A Existing EVA 6000 information

Initialized Storage System Properties

Name: Storage System1, Original initialization October 30, 2006

Type HSV200, version 6110, software CR0ECAxc3p-6110

Controller cache: 2048MB, Data cache: 2048MB, Total cache: 4096MB

Disk Groups are 63% allocated

Total: 18,434GB

Allocated: 11,698GB

Available: 6,736GB

Appendix – B Storage Presented by the SAN to the two Vsphere ESXi 4.0 Hosts

Name	Type	# VMs	Capacity MB	Provisoned MB	In Use MB	Free MB	Free %	Block Size
cll-internal-vmfs01	VMFS 3.21	1	511,744	152,721	135,174	376,570	73	1
cll-internal-vmfs02	VMFS 3.21	5	511,744	292,498	257,813	253,931	49	1
cll-internal-vmfs03	VMFS 3/21	6	1,023,744	722,908	686,272	337,472	32	4
cll-internal-vmfs04	VMFS 3.21	3	511,744	265,434	239,202	272,542	53	2
cll-internal-vmfs05	VMFS 3.33	7	2,095,872	1,234,070	1,106,048	989,824	47	2
cll-internal-vmfs06	VMFS 3.33	2	1,638,144	1,134,664	90,672	1,547,472	94	4
cll-internal-vmfs07	VMFS 3.33	2	2,095,872	1,169,992	733,528	1,362,344	65	4
cll-internal-vmfs11	VMFS 3.21	1	511,744	168,648	168,648	343,096	67	2

Appendix – C Storage Presented by SAN to Windows Hosts

Name	Type	Capacity MB	Provisioned MB	In Use MB	Free MB	Free %
cll-sv-gis	NTFS	500,000	500,000	231,000	268,000	%53
cll-sv-cvg01	NTFS	150,000	150,000	5,000	145,000	97%
Cll-sv-cv01	NTFS	1,000	1,000	200	800	%80

Appendix –D vSphere cll-sv-vmh07 (ESX host #1) 7 day disk performance snapshot
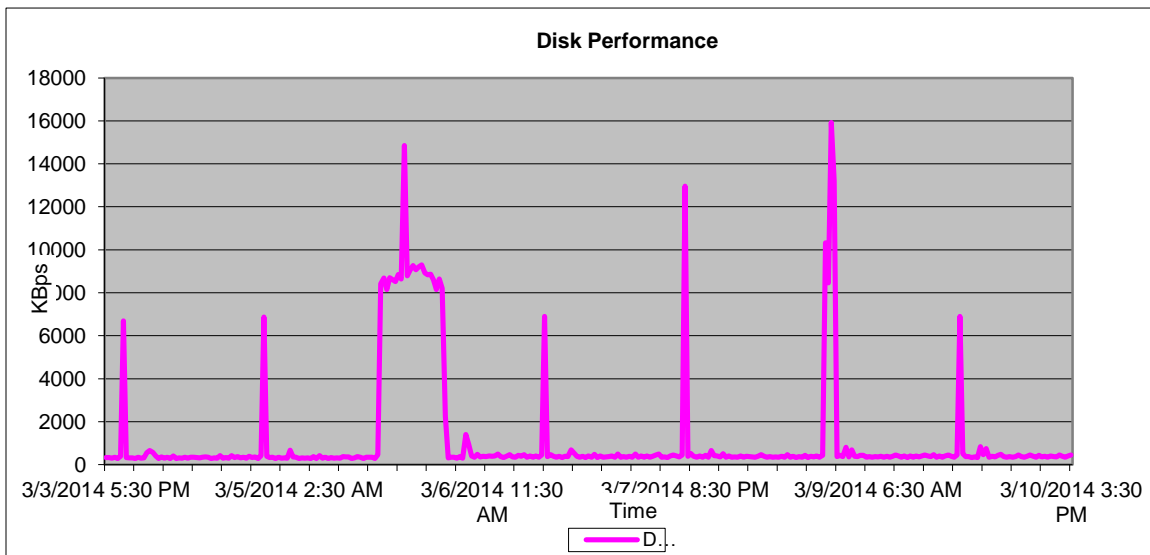
vSphere cll-sv-vmh08 (ESX host #2) 7 day disk performance snapshot
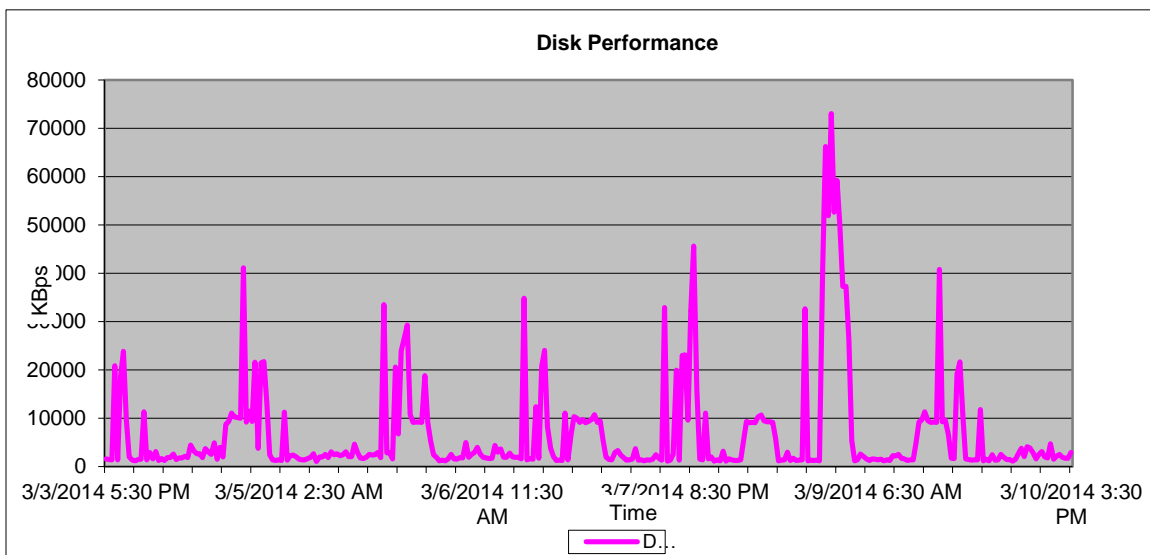
Appendix –E Virtual Guest Server Disk Statistics

VM	Disk	Capacity MB	Thin	Path
CLLJQ-2fLLLLCCP NMS	Hard disk 1	81,920	False	[cll-internal-vmfs03] CLL+JQ-2fLLCCP NMS/CLL+JQ-2fLLCCP NMS.vmdk
CLL-SV-AD02	Hard disk 1	30,720	False	[cll-internal-vmfs05] CLL-SV-AD02/CLL-SV-AD02.vmdk
CLL-SV-APP	Hard disk 2	51,200	False	[cll-internal-vmfs02] CLL-SV-APP/CLL-SV-APP_1.vmdk
CLL-SV-APP	Hard disk 1	20,480	False	[cll-internal-vmfs02] CLL-SV-APP/CLL-SV-APP.vmdk
cll-sv-cv02	Hard disk 1	30,720	False	[cll-internal-vmfs03] cll-sv-cv02/cll-sv-cv02.vmdk
cll-sv-cv02	Hard disk 2	20,480	False	[cll-internal-vmfs03] cll-sv-cv02/cll-sv-cv02_1.vmdk
CLL-SV-DC01	Hard disk 2	20,480	False	[cll-internal-vmfs03] CLL-SV-DC01/CLL-SV-DC01.vmdk
CLL-SV-DC01	Hard disk 1	20,480	False	[cll-internal-vmfs03] CLL-SV-DC01/CLL-SV-DC01_1.vmdk
cll-sv-EMCVADP	Hard disk 1	61,440	False	[cll-internal-vmfs05] cll-sv-EMCVADP/cll-sv-EMCVADP.vmdk
cll-sv-EMCVADP	Hard disk 2	1,048,576	True	[cll-internal-vmfs06] cll-sv-EMCVADP/cll-sv-EMCVADP.vmdk
CLL-SV-FILE	Hard disk 3	1,048,576	True	[cll-internal-vmfs07] CLL-SV-FILE/CLL-SV-FILE.vmdk
CLL-SV-FILE	Hard disk 1	20,480	False	[cll-internal-vmfs03] CLL-SV-FILE/CLL-SV-FILE_1.vmdk
CLL-SV-FILE	Hard disk 2	153,600	False	[cll-internal-vmfs03] CLL-SV-FILE/CLL-SV-FILE.vmdk
CLL-SV-Management	Hard disk 1	40,960	True	[cll-internal-vmfs05] CLL-SV-Management/CLL-SV-Management.vmdk
CLL-SV-PRINT01 (printsrv)	Hard disk 1	163,840	False	[cll-internal-vmfs11] CLL-SV-PRINT01/CLL-SV-PRINT01.vmdk
CLL-SV-PSQL01	Hard disk 5	61,440	True	[cll-internal-vmfs05] CLL-SV-PSQL01/CLL-SV-PSQL01.vmdk
CLL-SV-PSQL01	Hard disk 4	102,400	True	[cll-internal-vmfs05] CLL-SV-PSQL01/CLL-SV-PSQL01_1.vmdk
CLL-SV-PSQL01	Hard	40,960	True	[cll-internal-vmfs04] CLL-SV-

	disk 3			PSQL01/CLL-SV-PSQL01.vmdk
CLL-SV-PSQL01	Hard disk 2	51,200	False	[cll-internal-vmfs03] CLL-SV-PSQL01/CLL-SV-PSQL01.vmdk
CLL-SV-PSQL01	Hard disk 1	102,400	True	[cll-internal-vmfs04] CLL-SV-PSQL01/CLL-SV-PSQL01_1.vmdk
CLL-SV-SAV01	Hard disk 1	51,200	False	[cll-internal-vmfs02] CLL-SV-SAV01/CLL-SV-SAV01.vmdk
CLL-SV-VDM (Test.vmdk)	Hard disk 1	20,480	False	[cll-internal-vmfs02] CLL-SV-TEST/CLL-SV-TEST.vmdk
CLL-SV-VDM01	Hard disk 1	20,480	False	[cll-internal-vmfs03] CLL-SV-VDM01/CLL-SV-VDM01.vmdk
CLL-SV-WEBSITE	Hard disk 1	30,720	False	[cll-internal-vmfs02] CLL-SV-WEBSITE/CLL-SV-WEBSITE.vmdk
CLL-SV-WEBSITE	Hard disk 2	51,200	False	[cll-internal-vmfs02] CLL-SV-WEBSITE/CLL-SV-WEBSITE_1.vmdk
CLL-SV-WSUS	Hard disk 1	102,400	False	[cll-internal-vmfs03] CLL-SV-WSUS/CLL-SV-WSUS.vmdk
CLL-SV-XCH02	Hard disk 2	61,440	True	[cll-internal-vmfs02] CLL-SV-XCH02/CLL-SV-XCH02.vmdk
CLL-SV-XCH02	Hard disk 1	61,440	False	[cll-internal-vmfs01] CLL-SV-XCH02/CLL-SV-XCH02-000001.vmdk
CLL-SV-XCH02	Hard disk 4	179,200	False	[cll-internal-vmfs05] CLL-SV-XCH02/CLL-SV-XCH02.vmdk
CLL-SV-XCH02	Hard disk 3	184,320	True	[cll-internal-vmfs03] CLL-SV-XCH02/CLL-SV-XCH02.vmdk
CLL-SV-XDS	Hard disk 1	512,000	False	[cll-internal-vmfs05] CLL-SV-XSFS/CLL-SV-XSFS.vmdk
CLL-SV-XSFS	Hard disk 1	40,960	False	[cll-internal-vmfs05] CLL-SV-XSFS_1/CLL-SV-XSFS.vmdk
EMC Backup and Recovery Manager	Hard disk 1	40,960	False	[cll-internal-vmfs07] EMC Backup and Recovery Manager/EMC Backup and Recovery Manager.vmdk
EMC Backup and Recovery Manager	Hard disk 2	71,680	False	[cll-internal-vmfs07] EMC Backup and Recovery Manager/EMC Backup and Recovery Manager_1.vmdk
OLD MGMT	Hard disk 2	51,200	False	[cll-internal-vmfs04] CLL-SV-MGMT/CLL-SV-MGMT.vmdk
OLD MGMT	Hard disk 1	20,480	False	[cll-internal-vmfs01] New Virtual Machine/New Virtual Machine.vmdk

Opsview Core	Hard disk 1	81,920	False	[cll-internal-vmfs06] Opsview Core/Opsview Core.vmdk
pwfleet	Hard disk 1	30,734	False	[cll-internal-vmfs01] pwfleet/pwfleet.vmdk
Sophos Virtual Email Appliance	Hard disk 1	20,480	False	[cll-internal-vmfs05] Sophos Virtual Email Appliance/Sophos Virtual Email Appliance.vmdk
Sophos Virtual Email Appliance	Hard disk 2	106	False	[cll-internal-vmfs05] Sophos Virtual Email Appliance/Sophos Virtual Email Appliance_1.vmdk
VM-Apenaflo	Hard disk 1	51,216	False	[cll-internal-vmfs05] VM-Apenaflo/VM-Apenaflo.vmdk
VM-CDCOUNTER	Hard disk 1	10,240	False	[cll-internal-vmfs04] VM-CDCOUNTER_1/VM-CDCOUNTER.vmdk
VM-CDRECEPTION	Hard disk 1	51,216	False	[cll-internal-vmfs05] VM-CDRECEPTION/VM-CDRECEPTION.vmdk
VM-FNAPCLERK1	Hard disk 1	20,480	False	[cll-internal-vmfs05] VM-FNAPCLERK1/VM-FNAPCLERK1.vmdk
VM-FNPAYMENTS	Hard disk 1	20,480	False	[cll-internal-vmfs04] VM-PAYMENTS/VM-PAYMENTS.vmdk
VM-FNRECEPTION	Hard disk 1	20,480	False	[cll-internal-vmfs05] VM-FNRECEPTION/VM-FNRECEPTION.vmdk
VM-PWWATERTECH 2	Hard disk 1	20,480	False	[cll-internal-vmfs04] VM-PWWATERTECH2/VM-PWWATERTECH2.vmdk
vm-remote-water	Hard disk 1	30,720	False	[cll-internal-vmfs01] vm-remote-water/vm-remote-water.vmdk
VM-SHORETEL	Hard disk 1	15,360	True	[cll-internal-vmfs04] VM-SHORETEL/VM-SHORETEL.vmdk
VPN Access Server	Hard disk 1	16,384	False	[cll-internal-vmfs05] VPN Access Server/VPN Access Server.vmdk

Appendix –F Virtual Server Partition Statistics

VM	Disk	Capacity MB	Free MB	Free %	Host	OS
CLL + JQ-2fLLLLCCP NMS	C:\	81,817	64,095	78	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server

						2008 R2 (64-bit)
CLL-SV-AD02	C:\	30,617	11,764	38	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-APP	D:\	51,191	39,539	77	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-APP	C:\	20,465	7,322	35	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
cll-sv-cv02	C:\	30,617	8,560	27	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-DC01	C:\	20,465	6,307	30	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-DC01	D:\	20,473	18,410	89	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
cll-sv-EMCVADP	K:\	51,191	6,051	11	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
cll-sv-EMCVADP	E:\	1,048,572	1,047,985	99	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
cll-sv-	F:\	20,465	12,677	61	cll-sv-	Microsoft

EMCVADP					vmh07.lomalinda-ca.gov	Windows Server 2008 R2 (64-bit)
cll-sv-EMCVADP	C:\	61,337	42,985	70	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-FILE	C:\	20,465	11,378	55	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-FILE	E:\	1,048,570	456,685	43	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-FILE	F:\	153,597	22,157	14	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-Management	C:\	30,717	12,240	39	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-PRINT01 (printsrv)	C:\	163,737	100,324	61	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-PSQL01	D:\	61,436	27,332	44	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-PSQL01	E:\	71,672	26,955	37	cll-sv-vmh08.lomalind	Microsoft Windows

					a-ca.gov	Server 2003, Standard Edition (32-bit)
CLL-SV-PSQL01	Y:\	51,191	4,121	8	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-PSQL01	X:\	30,725	3,329	10	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-PSQL01	F:\	102,398	83,396	81	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-PSQL01	C:\	40,959	21,932	53	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-SAV01	D:\	30,710	28,708	93	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-SAV01	C:\	20,481	8,616	42	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-VDM (Test.vmdk)	C:\	20,465	12,724	62	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003,

						Standard Edition (32-bit)
CLL-SV-VDM01	C:\	20,465	14,863	72	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-WEBSITE	C:\	30,719	4,394	14	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-WEBSITE	E:\	51,191	6,068	11	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
CLL-SV-WSUS	C:\	102,297	5,720	5	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-XCH02	C:\	61,337	18,195	29	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-XCH02	L:\	61,436	60,949	99	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-XCH02	E:\	184,316	26,990	14	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-XCH02	R:\	179,196	39,111	21	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-XDS	E:\	465,496	463,686	99	cll-sv-vmh07.lomalind	Microsoft Windows

					a-ca.gov	Server 2008 R2 (64-bit)
CLL-SV-XDS	C:\	46,399	24,826	53	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
CLL-SV-XSFS	C:\	40,857	18,960	46	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2008 R2 (64-bit)
EMC Backup and Recovery Manager	/	13,835	10,728	77	cll-sv-vmh08.lomalinda-ca.gov	Suse Linux Enterprise 11 (64-bit)
EMC Backup and Recovery Manager	/var	2,957	2,768	93	cll-sv-vmh08.lomalinda-ca.gov	Suse Linux Enterprise 11 (64-bit)
EMC Backup and Recovery Manager	/boot	113	85	74	cll-sv-vmh08.lomalinda-ca.gov	Suse Linux Enterprise 11 (64-bit)
OLD MGMT	C:\	20,465	9,525	46	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
OLD MGMT	D:\	51,191	12,913	25	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows Server 2003, Standard Edition (32-bit)
Sophos Virtual Email Appliance	/persist	10,185	9,425	92	cll-sv-vmh08.lomalinda-ca.gov	Other (32-bit)
Sophos Virtual Email Appliance	/tmp	934	934	99	cll-sv-vmh08.lomalinda-ca.gov	Other (32-bit)
Sophos Virtual Email Appliance	/	1,483	998	67	cll-sv-vmh08.lomalinda-ca.gov	Other (32-bit)

Sophos Virtual Email Appliance	/boot	477	440	92	cll-sv-vmh08.lomalinda-ca.gov	Other (32-bit)
VM-Apenaflo	C:\	51,207	30,147	58	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows XP Professional (32-bit)
VM-CDCOUNTER	C:\	10,228	1,533	14	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows XP Professional (32-bit)
VM-CDRECEPTION	C:\	51,207	28,501	55	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows XP Professional (32-bit)
VM-FNAPCLERK1	C:\	20,479	3,736	18	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows XP Professional (32-bit)
VM-FNPAYMENTS	C:\	20,479	7,355	35	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows XP Professional (32-bit)
VM-FNRECEPTION	C:\	20,479	8,323	40	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows XP Professional (32-bit)
VM-PWWATERTECH2	C:\	20,479	6,994	34	cll-sv-vmh07.lomalinda-ca.gov	Microsoft Windows XP Professional (32-bit)
vm-remote-water	C:\	30,710	21,675	70	cll-sv-vmh08.lomalinda-ca.gov	Microsoft Windows XP Professional (32-bit)
VPN Access Server	/	15,998	14,107	88	cll-sv-vmh08.lomalinda-ca.gov	Ubuntu Linux (64-bit)